



ARTICLE • CLIMATE & HISTORY AT GLACIER NATIONAL PARK

Causes & Consequences of Climate Change at Glacier National Park

[Glacier National Park \(https://www.nps.gov/glac/\)](https://www.nps.gov/glac/)



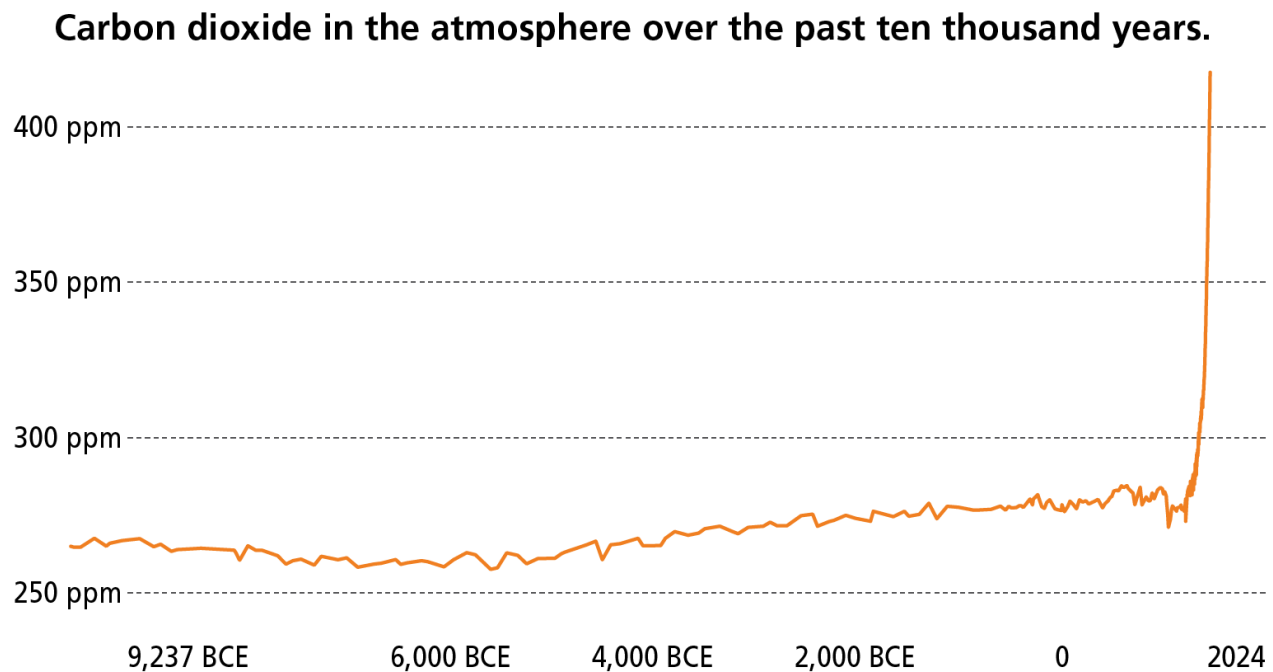
This photograph of the Many Glacier Valley in the early 20th century was donated by the Frisbee Family. The exact date and name of the photographer are unknown.

Before Glacier National Park was established in 1910, oil wells could be seen below active glaciers.

Both the causes and the consequences of climate change are intertwined here. Burning fossil fuels releases carbon dioxide, a greenhouse gas that warms the planet. High elevation areas like Logan Pass are warming much faster than the global average, causing glacier retreat here and around the globe. Since early drillers moved into this area the amount of carbon dioxide in the atmosphere has risen sharply.

If the old stories are true, early prospectors were lured to natural oil seeps in Glacier by bears that had wallowed in the “black gold.” In 1892, a local paper presumed that this was “the only case where bears have been the guides of men to valuable deposits beneath the surface of the earth.”

By the end of 1901, the Butte Oil Company had started drilling Montana's first oil well at the head of Kintla Lake in what is now the northwest corner of the park. Others thought they would find fortune by drilling in the Many Glacier Valley.



The orange line on this graph shows the carbon dioxide in the atmosphere remaining relatively stable over the past ten thousand years until rising rapidly in the past century.

In 2024, atmospheric CO2 [reached \(https://www.noaa.gov/news-release/during-year-of-extremes-carbon-dioxide-levels-surge-faster-than-ever\)](https://www.noaa.gov/news-release/during-year-of-extremes-carbon-dioxide-levels-surge-faster-than-ever) 427 parts per million.

But the dream of riches did not pan out. One prospector was able to pipe just enough gas to burn for warmth in the winter. No one else did much better. The eager team at Kintla only ever found enough to get their hopes up. Then, sometime in the winter of 1902-1903, the accidental ignition of leaking gas sparked a fire that destroyed their whole operation. What little oil they had found, along with their buildings and equipment, went up in a cloud of black smoke.

The oil boom ended by the time the park was established, but carbon dioxide molecules released in that fire are still in the atmosphere, adding to the 421 parts per million (ppm) recorded in 2022, warming the Earth and melting the glaciers.



Pools of naturally occurring oil are still found seeping from the ground throughout the park.

NPS Lombardi

“An atmosphere of that gas would give to our earth a high temperature,” wrote Eunice Foote in 1856. Her research is the first known to have demonstrated the existence of greenhouse gases. Prior to the Industrial Revolution, carbon dioxide levels were consistently around 280 ppm for about 6,000 years.

“The burning of coal, oil, and natural gas,” is releasing carbon dioxide and warming the climate, announced a 1965 report from the Lyndon B. Johnson administration. These changes “could be deleterious from the point of view of human beings,” the Johnson report cautioned.

“It is becoming increasingly clear that we should anticipate substantial climate change during the next several decades as a result of man’s impact on the composition of the atmosphere.” That was the warning from NASA scientist, Dr. James Hansen to Congress in March, 1982.

The amount of carbon dioxide in the atmosphere [reached 421 parts per million \(ppm\) in 2022 \(https://www.noaa.gov/news-release/carbon-dioxide-now-more-than-50-higher-than-pre-industrial-levels\)](https://www.noaa.gov/news-release/carbon-dioxide-now-more-than-50-higher-than-pre-industrial-levels), the highest concentration in human history. “We have known about this for half a century, and have failed to do anything meaningful about it,” said senior NOAA scientist, Pieter Tans.

The information in this article is featured in exhibits outside the Logan Pass Visitor Center. Check the

exhibits out for yourself next time you visit!

Sources

Part of a series of articles titled [Climate & History at Glacier National Park \(https://www.nps.gov/articles/series.htm?id=38A5C3BE-F6A6-4461-6AA526BAA404C483\)](https://www.nps.gov/articles/series.htm?id=38A5C3BE-F6A6-4461-6AA526BAA404C483).

Next: [Global Warming: Solutions & Benefits at Glacier National Park \(https://www.nps.gov/articles/000/global-warming-solutions-benefits-at-glacier-national-park.htm\)](https://www.nps.gov/articles/000/global-warming-solutions-benefits-at-glacier-national-park.htm)

TAGS

glacier national park

climate

change

changing

crisis

oil

history

historic

well

fossil fuels

global warming

many glacier

national park

lyndon

johnson

logan pass

exhibit

oil

fuel

pollution

Last updated: October 10, 2024

Was this page helpful?

☐ Yes

☐ No



An official form of the United States government. Provided by [Touchpoints \(https://touchpoints.app.cloud.gov/\)](https://touchpoints.app.cloud.gov/)